

STATEMENT ON THE NUCLEAR REGULATORY COMMISSION'S RULE ON  
RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION

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INTRODUCTION

Good afternoon. My name is Ramona Trovato; I am the director of EPA's Office of Radiation and Indoor Air. Today I represent the United States Environmental Protection Agency in our role of protecting the health of our fellow Americans from exposure to environmental radiation. My responsibilities include developing standards to protect the public and the environment from radiation. Protecting the public is more than just a duty to me, it's the right thing to do, even though it is not always the popular or easy thing to do. I know that my colleagues at the Nuclear Regulatory Commission feel the same way. That is why my staff and I are troubled by the NRC draft rule on radiological criteria for license termination that is before us today. We believe the Nuclear Regulatory Commission started on the right path, in the development of its decommissioning rule, but is now on the wrong path.

For many years, the EPA and NRC staffs have met on numerous

occasions to discuss issues pertinent to the proper cleanup of sites contaminated with radiation. They reviewed data, and discussed technical and policy issues. EPA participated in NRC's extensive national public workshops on site cleanup. Even though they did not always agree on every point, the result of that cooperative effort was the NRC's proposed decommissioning rule. EPA supported that rule. We believed, and continue to believe that the NRC proposal was protective of public health and the environment. EPA was prepared to exercise its option to exempt NRC from EPA rulemaking based on a finding that NRC's proposed rule was sufficiently protective of public health and the environment. I regret to say that the rule that NRC now proposes to finalize would not adequately protect either the health of our citizens or our nation's natural resources.

In August of 1994, the NRC proposed new regulations that would have mandated how clean nuclear power plants and other radiation facilities would have to be before they could be released to the general public. The proposed regulations were good for protecting the public and the environment for two basic reasons. First, they proposed sufficiently protective levels for cleaning the air, soil, and water (including groundwater) of radioactivity. The regulation would have ensured equity for all Americans who might be exposed to residual contamination, be it a single family living on the land and drinking from a well or an entire urban neighborhood living on released property. Second, if it was too difficult to clean up the radioactive pollution on the property for unrestricted use, the proposed standard allowed beneficial use of the land by requiring restrictions on uses of the land to ensure adequate protection of the public and the environment.

On November 15, 1996, Chairman Jackson in a letter to OMB,

stated that NRC planned to make significant changes to its proposed rule.

Changes were made, but EPA did not see these changes until April 1, 1997 (three weeks ago), when NRC sent copies of its draft rule to EPA. We were very disappointed. The changes that were made would permit a significantly increased risk of cancer to the public, would drastically reduce the protection of a major national, natural resource -- ground water, and would reduce public input to the decision process at sites difficult to clean up. NRC staff, in the preamble of the current draft, states its belief that EPA should find the NRC rule sufficiently protective. Let me state clearly and unequivocally that EPA cannot find NRC's draft rule to be sufficiently protective. That conclusion has been conveyed in writing by the Administrator of EPA to the Chairman of the Commission.

Today, I want to discuss three fundamental issues, and tell you about EPA's concerns. The first is the need to establish a level of protection from radioactive materials that is both adequately protective and consistent with the protection afforded the public from other environmental carcinogens. The second is the issue of adequate provision for public participation. The third is the need to protect our Nation's natural resources -- in this case, ground water that is a current or potential source of drinking water.

#### LEVEL OF PROTECTIVENESS

Let me first discuss the level of protectiveness afforded by the current draft rule. For unrestricted release of a site to the public, NRC originally proposed a cleanup level of 15 millirem per year. The current NRC draft increases this to 25

millirem per year, nearly doubling the allowed level of cancer risk to the public. But that is not the whole story. NRC has also added a provision that would allow as high as 100 millirem per year for unrestricted release. This level is an increase of about seven times their original proposal and, by NRC's own assessment, corresponds to a lifetime risk of cancer of one in two hundred ( $5 \times 10^{-3}$ ). The draft does have some restrictions that would prevent some sites from going to 100 mrem/yr, but we think it is clear that in practice the rule often would allow sites to clean up to only 75, 80, or more. Although 80 is better than 100 mrem/yr, it still results in a cancer risk of 1 in 250, a risk that is simply unacceptably high. It is ironic to note that at the same time the President was saying, in his State of the Union message, "If you pollute the environment, you should clean it up.", NRC was loosening up its cleanup standards. Why is this relaxation needed for NRC licensees?

Both the proposed and the current draft provide flexibility for difficult-to-clean up sites by including criteria for license termination under restricted use. The criteria include, among other things, requirements that the licensee make provisions for legally enforceable institutional controls that will protect citizens from the higher levels of contamination that are left in place. The licensee must also provide sufficient financial assurance to enable an independent third party to provide the necessary control and maintenance. We agree with this flexibility and the efficiency it provides, and believe this flexibility is sufficient for the tough cases that NRC is concerned about.

EPA's Superfund experience is that protective levels can be met with creative land use controls and reasonable cleanup efforts. There is simply no need to allow higher risks to the

public just to decommission sites. We have repeatedly asked NRC for specific examples of cleanups where protective levels cannot be met. We have yet to see any. We would hope that NRC would not change a fine proposal and expose the public to unnecessary risks without first allowing us to work together on a real world example of a supposedly problem site.

NRC has expressed the view that this draft rule would satisfy Federal radiation protection guidance, proposed for public comment by EPA on December 24, 1994. For the record, I wish to state that it would not. EPA's proposal made a clear distinction between a theoretical upper bound on exposure of individuals to radiation from all sources, now and in the future, and limits applicable to individual sources. It specified that regulations applicable to any individual source of exposure should be limited to well below that theoretical upper bound. The objective of the guidance was to achieve consistency among the risk management goals that apply to all environmental carcinogens, including radiation, under a wide range of environmental statutes. The goal specified was a lifetime risk of no greater than about one in ten thousand. Perhaps the proposed guidance did not make this adequately clear. We will ensure that any final recommendations to the President are unambiguous on this point.

NRC's draft final rule would permit, at the extreme, release of a site for unrestricted use with residual radioactive contamination yielding the full value of the theoretical upper bound on dose to an individual - 100 mrem per year. The fact that the rule contemplates that a lower value, 25 mrem per year, will normally be met is irrelevant. The function of a standard is to provide a limit for the difficult cases, not to identify the parameters bounding the easy ones.

To illustrate the unreasonableness of this change in the allowable dose, let me point out that nuclear power reactors are now operating successfully under EPA's standards, set almost 20 years ago, with maximum releases of radioactive materials that correspond to doses of approximately 15 mrem per year effective dose equivalent. NRC's implementation of this standard has, in both guidance and practice, been even more protective. Under the license termination draft before us today, a reactor site could be released for unrestricted use with residual contamination yielding doses approximately *seven times higher* than those permitted from a reactor during its operating lifetime, when it was producing the benefit of electrical power to society -- thus promoting inconsistent protection of the public. I must also point out that a 100 mrem dose would result in a risk that is seven times higher than would be permitted for other environmental pollutants under the Nation's laws governing the cleanup of contaminated sites. Why should a citizen who lives on or near a former NRC-licensed site be exposed to a higher risk of cancer than one living near an operating nuclear power plant, or someone living on or near a former superfund site? NRC's proposed rule recognized this dichotomy, and protected everyone equally.

This year's State of the Union address included an exhortation to protect our environment in every community so that our children grow up next to parks. There are over 4,500 NRC licensees that could release contamination into the environment, and these licensees should live by a simple rule: If you pollute our environment, you should pay to clean it up. To put it bluntly, radiation should not be treated as a privileged pollutant. You and I should not be exposed to higher risks from radiation sites than we would be from sites which had contained

any other environmental pollutant.

In a separate, but related issue, on September 16, 1996 NRC released a series of Strategic Assessment Issue Papers. One dealt with decommissioning of non-reactor facilities. That paper included an option for transferring certain sites to the EPA's Superfund program. Among the reasons cited for the transfer, NRC said that this option would enable EPA to utilize its greater legal authority to compel remediation. NRC must have known that transferring these sites to Superfund would ensure that they would be cleaned up to criteria similar to those set forth in their proposed rule for radiological criteria for license termination. Now, NRC is suggesting a different, more lenient standard for the rest of their licensees. Why should we have a double standard for these cleanups?

NRC says in the preamble of their current draft that EPA should find their rule to be sufficiently protective. Let me emphasize once again, NRC's draft rule is not sufficiently protective.

#### PUBLIC PARTICIPATION

I know that NRC and EPA share the view that early, direct, and meaningful public involvement is essential in decision-making to protect our environment. In fact, the Commission states that public involvement is a cornerstone of strong, fair regulation of the nuclear industry.

I know, however, that there are differences in how EPA and NRC translate policy into action. In its regulatory requirements under this decommissioning rule, NRC does not require itself to incorporate or respond to public comments regarding its own license termination actions.

NRC has weakened public participation requirements, while at

the same time, loosening the standards that its licensees must meet. While we oppose this action, it seems obvious to us that any regulatory activity that could result in increased risk to the public should require public input to the public entity making that decision, in this case, the NRC. The NRC owes it to the public to respond to their concerns on the record. The public is entitled to know why decisions are made to put their lives at increased risk.

In addition, NRC has removed the provision requiring a Site Specific Advisory Board. In the proposed rule, this Board was to have been convened for situations in which a licensee could not meet the conditions for unrestricted release, in order to obtain advice regarding the proposed restricted decommissioning. The Advisory Boards were to provide advice to NRC licensees on ways to reduce the radioactivity; on whether institutional controls would actually meet the standard, would be enforceable, or would impose undue burdens on the local community; and on whether the licensee had provided sufficient financial assurance. EPA has found these boards to be very helpful in improving cleanup decisions at Superfund sites. Unfortunately, the NRC's most recent draft has deleted the requirement for a Site Specific Advisory Board. We believe that both NRC and the public will suffer from its removal.

#### GROUND WATER THAT IS A CURRENT OR POTENTIAL SOURCE OF DRINKING WATER

We are deeply concerned over the inadequate protection of ground water that is a current or potential source of drinking water in this draft rule. NRC has not adequately addressed the three crucial issues involved in the protection of ground water. First, ground water must be protected as a natural resource.



Second, protecting ground water used as drinking water is a human health issue. Third, protecting ground water used as drinking water involves basic issues of economic fairness.

EPA's position on protecting ground water as a natural resource represents a balanced, reasoned approach. Not all ground water, but rather only ground water that is a current or potential source for drinking water must be protected. That protection must meet the public health requirements set out in the Safe Drinking Water Act, not because those requirements were developed for ground water, but because current and potential sources of drinking water are an important national resource. Finally, there is no justification to pass the cost of cleanup from the polluter to the user. As President Clinton said in his State of the Union Address, "Americans have a right to expect that our water will be the cleanest in the world."

In 1994, the NRC proposed in their draft rule a separate ground water standard that protected ground water to the drinking water standards. NRC's current draft rule is radically different from their original proposal. Now, no separate ground water standard exists.

In a November 15, 1996 letter to OMB, NRC Chairman Jackson asserted that protecting ground water is too costly. Part of the NRC rationale is that much of the ground water is clean, and that the expensive testing needed to determine that it is clean would not result in any saved lives. But these arguments (please pardon the pun) don't hold water. First of all, in any situation where a drinking water pathway now exists, NRC would have to include ground water testing. Without it, NRC would be unable to demonstrate compliance with its own standard.

Secondly, in any situation where contamination threatens ground water, and NRC does not require testing, NRC would be

allowing potentially unlimited contamination of that ground water. The fact that NRC thinks there are many places where testing would not occur illustrates that the draft rule could allow many places to have radioactively contaminated ground water. In that same letter, NRC says that the cost of cleaning the water can be justified only when there is a relatively large population near the polluted water. I am certain that NRC does not mean to suggest that rural citizens have a lesser right to safe drinking water than do city dwellers.

It is important to note that NRC, in its rule on uranium mill tailings, already protects ground water used, now or in the future, as drinking water to the levels specified under the Safe Drinking Water Act. Last August, when signing the "Safe Drinking Water Act Amendments of 1996, the President said "this Act will provide the American people with much greater protection for the drinking water on which we all rely every day of our lives." Six months later, NRC deleted its requirement for meeting MCLs from their cleanup rule. Why is the NRC changing its policy on ground water used as drinking water?

In looking for guidance on protecting ground water as a natural resource, we should look to the precedents on how we protect our nation's air and surface water. Air and surface water are protected as natural resources through the Clean Air Act and the Clean Water Act. Just because ground water is "out-of-sight" doesn't mean that it should be "out-of-mind." This vital resource provides over 50% of the U.S. population -- 140 million citizens-- with their drinking water. Nearly two thirds of all ground water now used is utilized by farmers for irrigation of the fruits and vegetables that you and I eat every day.

The issue of ground water is also a health issue -- our

health. As I stated earlier, NRC removed the separate ground water standard from the current draft. NRC licensees now would be allowed to pollute ground water --water that you and I could drink -- with radioactive contaminants at levels 25 times greater than drinking water standards; this equates to a lifetime fatal cancer risk of 1 in every 200 people. For the 50 million people drinking water from private wells (well water that is infrequently if ever tested for radionuclides) the NRC draft would permit unprecedented risk and costs.

This final point, about the economics of cleaning up contaminated ground water, is of vital importance. The concept of "polluter-pays" is ultimately a question of fairness. The burden of cleaning up ground water cannot be allowed to shift from the polluter to the public, as it would under the current NRC draft rule. If the polluter escapes his responsibility, any number of innocent property owners could be forced to pay. How? In many localities, private ground water sources must be tested and, if necessary, remediated or treated before a property can be sold. This could decrease the value of the home and it could require the homeowner to pay for expensive systems to reduce the radionuclides in their water. On a broader scale, this same scenario could affect an entire aquifer or an entire community. Don't forget, ground water and pollution in ground water often move very slowly. It could be decades or centuries before the contamination shows in the wells of community water systems adjacent to a former licensee--long after the former NRC licensee is forgotten or has gone out of business. Does the NRC expect that the responsibility for managing and remediating such sites should be transferred to EPA's Superfund program?

In conclusion, let me summarize our concerns. This draft rule would not ensure adequate protection of the public health

and the environment. It would not provide the public the level of protection from residual radioactive materials from NRC licensees that they are afforded for other environmental pollutants under EPA's remediation programs, including those that involve radioactive materials. It would weaken key opportunities for public input. Finally, it would exempt radioactive pollutants from most NRC licensees from the ground water protection requirements that others must meet. In short, it would create a situation in which radioactive materials that are subject to NRC regulation are treated as privileged pollutants that may meet lesser, more relaxed goals for protection of the public and natural resources than other carcinogens.

As the Administrator advised the Chairman of the Commission in her letter of February 7, 1997, regarding the current draft of this rule, EPA would find it necessary to reconsider its exemption of NRC licensees from provisions of Superfund. That exemption was based on the presumption that NRC will provide protection of the public and the Nation's natural resources equivalent to that provided under Superfund. This draft of the rule would not satisfy that test. We trust that, upon reconsideration, the NRC will satisfy EPA's concerns. If that does not occur, these issues should be elevated to the Administrator of EPA and the Chairman of the NRC for resolution.

We know that our colleagues at NRC consider protecting human health and the environment to be a national priority. We sincerely hope that they will return to their earlier proposal on radiological criteria for license termination as a reaffirmation of that principle.

Thank you.